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TRANSPORT PLANNING IN SUB-SAHARAN AFRICA

Report 3: The challenges of meeting children and young people's mobility and transport needs

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Introduction

The previous progress report in this transport series (Report 2) focused on women's physical mobility and their transport use and needs in sub-Saharan Africa, emphasising the widespread failure of transport planners to improve women's access to facilities and services to date. This third report covers an area which has received even less attention from transport planners (apart from limited work on road safety) and remarkably little direct coverage in the literature to date: the challenges of meeting children and young people's mobility and transport needs for accessing the services and other facilities and activities important to their lives. This is an extremely important omission, given that over half the population of many African countries consists of people under the age of 18. Improving mobility and physical access to health and education facilities for both girl and boy children is likely to have massive implications for their subsequent livelihood potential (Bartlett 2001) and is crucial to many of the Millennium Goals, notably universal primary education, promoting gender equality and women's empowerment, and reduced child mortality (Fay et al. 2005; AU-AfDB-ECA-WB-EU 2005)¹. It thus may play a vital role in helping to break inter-generational cycles of poverty. The paper reviews the limited literature available and points to major research gaps².

There are likely to be important differences in young people's spatial mobility related to age, gender, family socio-economic status and parental status (whether they are orphans, single parents, foster children, they or their family members are affected by HIV/AIDS, etc.), according to whether they live in urban or rural locations, whether they have a disability, and to the broader socio-cultural and economic context and physical environment. Perceptual and cultural factors (for instance, attitudes to girls' mobility in Moslem societies, child rearing practices), in particular, may play a significant role. Although the published evidence on socio-spatial aspects of children and young people's mobility is limited, there is relevant wider literature available on issues such as child labour, street children, education, health services, child poverty, and child rights.

¹ Physical accessibility to services does not ensure satisfactory service delivery: completion of a full course of primary education, for instance, does not necessarily imply achievement of even basic literacy and numeracy, when classes are large, books few and teachers poorly trained and frequently absent (James 2006; World Development Report 2007).

² An ESRC/DFID-funded three-country child-centred study of child mobility is currently in progress (in Ghana, Malawi, South Africa), led by the author: collaborators include staff from the Universities of Durham, Malawi, Cape Coast, Ghana, and CSIR, Pretoria (Albert Abane, Michael Bourdillon, Kate Hampshire, Mac Mashiri, Alister Munthali, Elsbeth Robson). This will explore many of the gaps identified in this paper and should add considerably to the information presented here. See www.dur.ac.uk/child.mobility/ for further information.

It is important to consider the mobility and transport needs of children and young people in the context of their lives within the family and household and in terms of potential life and livelihood trajectories. For instance, access³ to facilities and services may depend not only directly on transport (vehicles and roads) availability and cost allowing children to travel but may also be strongly affected by family and household demands for children's work. 'Childhood' is a very different concept from that prevalent in Western urban societies. Urban and rural children from an early age commonly contribute to household production and family incomes, in a process widely perceived as positively aiding children's socialisation in the extended family and the community (e.g. Government of Ghana 1992:21). However, deteriorating economic conditions in many parts of Africa, sometimes associated with or exacerbated by HIV/Aids, have put increasing pressures on families and consequently on their children. Children of six years and above often make a major contribution to household production and survival strategies.

Given space constraints, the emphasis throughout the paper is on daily mobility and associated transport needs and constraints. Many young people, of course, will experience mobility on a more extensive scale through permanent, seasonal or temporary migration⁴.

Young people's lifeworlds and mobility patterns: studies in urban and rural contexts

The daily mobility of young people in *urban settings* has been considered in a small number of studies including early research by Schildkraut (1981) in Moslem Kano, Nigeria, where the mobility of children - particularly young girls - is essential for the maintenance of wife seclusion. Kampala (Uganda) is the setting for two studies focused on street children: Young and Barrett (2001) examine the spaces within which they operate, while van Blerk (2005) points to the important links between identity and mobility. Another Ugandan study (Witter and Bukokhe 2004), based on a countrywide survey of children's own perspectives of poverty, suggests the mobility of poor girls is particularly limited by their fear of being abused and exploited. A novel trans-generational study in Cape Town (Lee 2004) draws attention to generational changes in mobility among migrants, such that first generation parents closely restricted their children's movements, especially girls', but more because of respectability than safety concerns: migrants perceived the city as a place of moral decay. In the latter decades of apartheid, she suggests parental ability to regulate movements of urban youth declined not only as a result of the end of influx control, but also due to deregulation of the transport industry, which allowed a massive

³ i.e. ability and ease of reaching destinations, as in the transport usage of the term (Bryceson et al. 2003).

⁴ Temporary migration of the child without their immediate family is often associated with the need to access secondary education or with child fostering arrangements (common for instance in West Africa, where parents may give their children to relatives or even non-relatives such as elderly people as companions and domestic or marketing assistants – see Schildkraut 1981, Bledsoe and Brandon 1992, Turner and Kwakye 1996) but also with conflict and natural disasters. In southern Africa, HIV/AIDS has induced substantial migration of young people: orphaned children can have significantly higher probabilities of moving (Young and Ansell 2003; Ford and Hosegood 2005;). Providing services for regularly mobile children (i.e. in a nomadic context) is particularly challenging, though there have been innovative mobile schools projects, for instance in Kenya (Leggett 2005).

increase in taxis. Mobility is “‘worn with flair’ by third generational respondents as a confident assertion of greater opportunity and their increasingly consumerist selves”. A recent study of children in the very different context of suburban Cape Town suggests a range of issues may shape mobility, from the indelible marks in a landscape inherited from apartheid to domestic ‘guard’ dogs and traffic (Benwell 2006)⁵.

Perhaps the most substantial urban study of transport in Africa to date incorporating children took place in Accra in the early 1990s (Grieco et al. 1995, 1996; Turner and Kwakye 1996). This emphasises the high level of local mobility among children in low-income households, due to domestic tasks such as refuse removal, water and fuelwood collection and other activities including petty trade. It shows how the falling off in transport provision associated with structural adjustment measures (increased cost of vehicles and spare parts due to devaluation raising the cost of imports etc.) increased dependence on the work of women and children. Children are increasingly central to the economic organisation of households and may be taken in as foster-children to reduce the transport stress of middle-aged adults faced with transport under-provision: they act as domestic anchors, compensating for the absence of adult household members delayed in distant markets by transport problems. Timing of school shifts is crucial since this affects their ability to perform work. School-age girls also play a significant income role by providing labour in petty trading outlets. This can impact severely on girls' access to education (discussed below). Grieco et al.'s findings may well apply in other African urban contexts.

Work on children's and young people's daily mobility and transport in *rural areas* is surprisingly sparse. Katz's research in rural Sudan (1991, 1993, 2004) is particularly significant because of its specific focus on children's mobility in rural Africa. It records young children delivering messages and carrying food around the village, and subsequently how they may travel more frequently, depending on birth-order position. Katz finds a great deal of spatial autonomy, with few sex or status related differences evident until late in childhood. Only when girls reach puberty do their spatial horizons contract. Malmberg Calvo (1994) also made an early contribution in her work on women's role in rural transport, which includes data on children's transport tasks. Comparing children's contribution to domestic travel from surveys in Ghana, Zambia and Tanzania, she finds children account for a higher percentage in Ghana than in the other two countries and emphasises the role of older girls. She relates this principally to children's participation in water collection and suggests that trips to the grinding mill are restricted to older children because of the responsibility for cash transactions (Malmberg Calvo 1994: 9, 25). Robson (2004) presents detailed time studies to show how children in rural Hausaland are highly mobile across public space, in part due to the need to act as trading intermediaries for secluded women (though girls in particular also trade on their own account).

Physical mobility is not necessarily desirable in itself: it is often required principally due to the lack of geographical proximity to work and services (see Report 2, also Farrington 2007). One of the more depressing images of rural youth mobility in the literature is of young men in Western Kenya ‘tarmaccing’: moving endlessly to and forth between their village homes and town in search of work (Prince 2006). Negative components of mobility from rural areas are also strongly evident in Bryceson's

⁵ Also see Behrens 2004 on Cape Town.

(2006) report of growing incorporation of transactional sex in *ganyu* labour contracts made by Malawian girls and women for basic foodstuffs since the 2001-2 famine (because these now often entail travel outside the village). Across southern Africa, the high risk to youth of teasing, bullying and rape as they travel, mostly - though not wholly - directed at young girls, has been reported (for instance in Lesotho among girls travelling home from school, to the mills or to fetch water: GATNET, Mamoeketsi Ntho 11/10/2004 and in Zimbabwe and Eastern Cape, South Africa on the journey to school, Leach et al. 2000:15, Potgeiter et al. 2006). In rural areas of southern Ghana, by contrast, limits on children's spatial autonomy beyond the village area boundary (especially where this involved travel by motorised transport) appear to be more due to perceptions of their risk of getting lost rather than potential harassment (Porter and Blaufuss 2003). The extent and ways in which harassment influences girls' travel patterns and practices, and means of reducing harassment, is an area where further detailed research would be useful, for instance in helping to improve female school attendance figures.

The impact of youth mobility and immobility on the construction of *social networks* whether in urban or rural areas (or linking both) is an intriguing issue. A study of youth employment in the Gambia and Ghana suggests that social networks often seem more important than skills as an entrée to employment (Chant and Jones 2005). It is probable that such networks are built through a range of institutions, from the wider family to school, church, and beer hall, but we have little information on the significance of the interactions between youth mobility and social network construction in different places (though for a novel study in a UK context see Holland et al. 2007).

Access to formal education: making the journey to school

Bonnet (1993) observed that throughout Africa, with few exceptions, more than half the children in any given age-group fail to attend school regularly. In recent years, primary education has been given a substantial boost by the emphasis on 'free' universal primary education in the MDGs. Nonetheless, the opportunity costs of children's time spent at school and the parental contributions which commonly still have to be made (uniform, books, furniture, etc. e.g. see Konadu-Agyemang 2000:475 for Ghana), plus other factors such as poor school quality or lack of access to credit are observed to be continuing constraints (albeit varying in importance between urban and rural areas, see Ersado 2005). The significance of the time, effort and/or costs of transport incurred in getting to school, however, is rarely considered in any detail.

Schools, like health centres, are usually built in central places: secondary schools, in particular, are likely to be located at a distance from most rural communities (see Report 1). In remoter rural areas even primary school enrolment and attendance may be affected by travel distance, since schools cannot usually be provided in every settlement. There have been surprisingly few studies directly concerned with travel to school in Africa. A study by Gould (1973) noted that poor transport services forced most Ugandan children to walk to primary school while the low density of secondary schools usually required children to live away from home: this situation still pertains widely across Africa. In Ghana it has been observed that the closer the secondary school, the more likely that children are sent to primary school, as continuity of the child's education is feasible (Avotri et al. 1999 citing Boakye 1997) and that long walks to school due to lack of or high cost of transport and attendant problems of

lateness encourage late 'over-age' enrolment (especially of girls), truancy and early drop out (Avotri et al. 1999: 94-5, 165).⁶

Some of the most detailed travel to school data comes from South Africa, where a survey of rural KwaZulu Natal schools in 1998 found 75% of secondary school walkers walked over 3 kms to school and 43% of primary school walkers walked over 3kms: at least 280,000 children in this region walked for over 1 hour, one way to school, while a related survey of school principals found 70% of pupils were often tired at school, 60% were often late and 58% sometimes absent, due to long walking distances (Mahapa 2003). The 2003 South Africa National Household Travel Survey similarly found 76% of 'learners' walking to their educational destination and almost 3 million out of the 16 million total (especially those located in more rural provinces) spend more than an hour a day walking to and from educational institutions (Department of Transport 2003). When parental contributions and household labour demands are coupled with a long journey to school, these are likely, acting together, to present a particularly strong deterrent to attendance. However, a recent analysis of data for rural areas of 21 poor countries, including some of the poorest in Africa, throws some doubt on the ability of school building programmes *per se* to bring large increases in school participation rates (Filmer 2007; see also Bratton 2007). A programme incorporating a range of interventions may often be essential to improved participation⁷.

Children who are able to attend school may still be disadvantaged in their school performance by transport constraints in the home environment: at the household level transport failures may require children to carry water, firewood etc as well as to perform other household tasks, both before and after classes. These duties, which tend to fall particularly heavily on girls, in accordance with local cultural norms, delay the time when children leave for school, may cause them to arrive late at school (resulting in punishment from their teachers) and leave them exhausted during lesson time. Transport issues along the route to school (poor roads; unreliable, costly or non-existent transport services etc.) may add further to their problems.

The school transport situation is further complicated by the substantial expansion of private education in some countries, much of it supplied by the for-profit sector. Even poor families may choose not to send their children to the nearest state school, often because of perceived deficiencies in the quality of education provided. In Ghana and Nigeria, for example, 'budget' schools now attract families across a wide spectrum of incomes, because they are perceived to offer better quality education than the state school equivalent (Tooley, Financial Times 18/09/2006). In southern Ghana, even in villages off the paved road, some children are sent to private primary schools, despite the cost and difficulty of accessing transport: a village blacksmith, for example, sends his 6-year old daughter to a school about 15 miles distant because 'the teaching here is not effective' (Porter and Blaufuss 2003)⁸. The resort to *secondary* private

⁶ Of course, the constraints which affect children's travel to school, may also impact similarly on teachers, since few can afford their own vehicles.

⁷ The importance of a multi-sectoral approach to development intervention is emphasised in a number of recent studies: see Gibson and Mace (2006) for a particularly instructive study linking reduced water carrying with rising birth rates and child malnutrition.

education may also be partly a reflection of limited availability of places at state schools for the growing numbers of children graduating from the free primary education promoted by the MDG priorities (Lewin and Sayed, 2005).

The transport impacts on girls' education are of particular interest since girls' school enrolment rates are often considerably lower than boys' (with the exception of a few regions such as Lesotho and South Africa's Eastern Cape, where herding duties have traditionally been defined as boys' work). This can be related to a number of factors, including girls' heavy household duties, cultural perceptions regarding the (limited) value of girls' education, and perceived dangers for girls who have to travel a long distance to school or board away from home. Improved road access and transport availability can probably make a significant impact on girls' attendance at school in some contexts. The studies which are usually cited on this point were made outside our focus region: in Morocco, notably, these show that opening of a paved road increased the probability of girls attending primary school by 40% (Khandker et al. 1994, Levy and Voyadzis 1996, cited by OPM 2003 and by AU-AfDB-ECA-WB-EU 2005). However, a review of children out of school (DFID 2001:7) using DHS surveys suggests that in Niger, where there are only 41 girls per 100 boys at school in rural areas (compared to 80:100 in town), distance of home from school is a key factor.

Transport and access to health services

Difficulties of physical access to health services may impact on young people in a number of ways. Transport and time costs from settlements without health services and limited mobility of mothers and health staff can contribute, for instance, to low immunisation rates (Bosu et al. 1997; Porter 1997, 2002). This raises the likelihood of a wide range of diseases among children, including those associated with poor sanitation and water supplies. Since carrying water and garbage are often children's work, they are also potentially more exposed to specific health problems due to the heavy weights and noxious materials carried (Bartlett 2001). The fatality rate for young children who fall ill with cerebral malaria or meningitis is likely to be very high: a study in Malawi found that the majority of children presumed to be suffering from these two illnesses died whilst awaiting transport or within a few hours of delayed arrival at hospital (Cullinan and Pieterick 1998). Distance and lack of emergency transport are likely to be critical factors in low and delayed hospital referrals of children from many remote rural areas as Bossyns et al. (2006) show for Niger. Children in remoter areas are probably also more vulnerable to severe parasitic infections due to failure to access early treatment (Raso et al. 2005, drawing on their studies in western Cote d'Ivoire). Analysis of data relating weight-to-height of children to quality and accessibility of health services in Ghana led Lavy et al (1996) to suggest that reducing distance to clinics could substantially improve child health in rural areas. However, other factors, notably cost, quality of service available (AU-AfDB-ECA-WB-EU 2005 citing various studies) and socio-cultural factors influencing patterns of treatment-seeking (Kamat 2006), may be of even greater significance than distance to the health facility.

The implications of poor physical access may be particularly serious for teenage girls, who typically have less funds to pay transport fares and more time constraints than young men, and may also face restrictions on their mobility imposed by the local cultural context. The problems of physical access to reproductive health services may

contribute to the high levels of teenage pregnancy observed in many rural areas and dangerous home abortions among young women. Costs of travel (where transport is available) and/or the travel time to a distant health centre for pre-natal and post-natal checks may reduce the likelihood of timely attention and treatment even in urban areas. Since the risks of childbirth complications are higher than average among first time and very young mothers, problems of travel to health centres can have particularly adverse implications for the health of young women and their babies (World Bank 2006:150; also Report 2).

Young people as pedestrian transporters and transport operators

In rural areas, in particular, the transport gap caused by inadequate or costly transport facilities can contribute substantially to children's time poverty because of the common requirement to help carry goods for family members and others: this is a crucial but overlooked issue. Children's role in filling the domestic transport gap may have important implications for their ability to attend and perform well at school: it may also have health implications when the loads carried are very heavy, possibly resulting in deformation of the vertebral column and other permanent injuries (Malmberg Calvo 1994:30, Bartlett 2001). Women's domestic transport effort is now relatively well recognised (see Report 2), but children's domestic transport work is commonly subsumed under women's work rather than receiving specific acknowledgment: this is an area where carefully disaggregated studies of women's and children's effort in different cultural and environmental contexts are needed. There is remarkably little detailed information about children's work as load carriers apart from studies of the 'kayayoo' girl porters in Accra, Ghana (Grieco et al. 1996; Agarwal et al. 1997), who are reported to take excessive drugs to numb their pain, and a small study in rural southern Ghana which found children's load weights graduated according to age, with girls of 15 and over regularly carrying loads of 20-30 kg or more, and some reports (from teachers and pupils) of adverse impacts in terms of aches and exhaustion (Porter et al. in press).

Headloading, especially for domestic (as opposed to commercial) purposes, is generally considered a task for girls, women and young boys in sub-Saharan Africa: young men beyond their mid-teens are usually not expected to do such low-status work except in an emergency (e.g. Malmberg Calvo 1994: 28; Potgieter et al. 2006:15 for Eastern Cape, South Africa). By contrast, any work associated with mechanised transport – driving, minibus call boy, mechanic etc. - tends to be seen as a male preserve. Mahapa (2000), for instance, reports that the children who commonly help their parents by operating donkey carts in the Northern Province of South Africa (where they remain an important form of transport in remoter rural areas) are usually boys (aged 10 and over). In Ghana many young men work as push truck operators, especially in urban market centres, usually for very low returns, while in countries such as Nigeria, Kenya and Uganda, operation of cycle and motorbike taxis seems to be principally in the hands of young men (Grieco et al. 1996; Porter et al, in press; see also Report 1). The latter appears to offer a relatively lucrative livelihood for young men, though negative impacts (association with reckless driving, increased accident rates and violent crime) are now reported in some regions (see Waage 2006 on Ngaoundere, Cameroon).

The potential for Intermediate Means of Transport and other interventions to improve young people's mobility and access to services

Research on IMTs such as bicycles in Africa has focused principally on adult use (see reports 1 and 2). Current use of IMTs by children and their potential to improve children's mobility and access to services has received less attention. A case study of cycling among girls and boys in Accra (Grieco et al. 1995, 1996) is thus particularly valuable: it illustrates the impact of diverse ethnic backgrounds on child access to transport, since unlike children from northern Ghana living in Accra, children from southern ethnic groups are not encouraged to cycle by their families. Among boys it is perceived as dangerous: the behaviour of 'rebellious, deviant school age males'. If girls dare to ride they are considered of 'questionable sexuality' (Grieco, Turner and Kwakye 1995).

South Africa's Shova Kalula (Ride Easy) National Bicycle Programme, which commenced in 2001, is a particularly interesting government initiative not least because of its scale: it aims to provide one million low-cost bicycles (used and new) in rural and peri-urban areas to disadvantaged groups. The programme, which also provides training in riding and maintenance, is aimed at school children and farm workers. Although it has encountered a range of problems, including lack of spare parts, a shortage of locally available appropriate cycles (i.e. robust with load carrying capacity) and perceived abuse by parents purchasing cycles in their children's names, it offers an exciting opportunity to improve physical access to school and other facilities. An early assessment concluded that the project was helping school children to arrive at school in better time, but lacked adequate consideration of gender issues (Mahapa 2003): a new phase is now in progress.

The potential for Intermediate Means of Transport to improve children's access to services needs further investigation, particularly attitudes to cycling for girls across Africa and the extent to which this affects their school attendance and access to other facilities. If daughters are out of school because they are needed to help fill the domestic transport gap, broader IMT interventions aimed at the family might play a significant role, but we do not have sufficient evidence to support this suggestion. Other potential transport interventions, depending on local context, might include offering stipends to girls who have to travel a distance to school (an approach being piloted by the World Bank in Pakistan to encourage girls in to the classroom: Gatnet communication, 21/06/2006, last accessed 22/06/06), and introducing a locally adapted version of the 'walking bus' as a safety initiative to counteract dangers of rape/harassment (rather than primarily as a means of reducing pollution and traffic congestion, improving health etc. as in Western contexts, for which see Kingham and Ussher 2007).

Virtual mobility through use of mobile phones, internet and other ICTs, also has substantial potential to beneficially reduce the transport needs of all sectors of the population: among young people they often have particular appeal (World Bank 2006:32). For instance, E-learning, such as the 'hole in the wall' kiosk experiment recently conducted in India (Mitra 2006), may offer an alternative approach to problems of school access. The current rapid adoption of mobile phones across Africa, associated with the dramatic expansion of networks over the last few years, looks set to have especially massive impact, though the precise implications of this development for different people and places are still unfolding.

Transport interventions, whether to reduce traffic-related accidents among young people or to improve their mobility and access to services, need to involve them directly. In the UK the incorporation of young people's perceptions and views into account in road safety initiatives and transport planning is only just beginning (Barker 2003; Lupton and Bayley 2006) and in sub-Saharan Africa is at an even more preliminary stage (see Porter and Abane in press, and www.dur.ac.uk/child.mobility/ for details of recent and ongoing research).

Traffic accidents and road safety

As young people's mobility increases, inevitably traffic accident rates are also likely to rise. Coverage of children's road safety issues has been surprisingly sparse in the literature on African transport, given that accident rates in some African countries (albeit still under-reported) are among the highest in the world. Epidemiological trends in developing countries show that mortality rates of childhood infectious diseases are declining while rates of traffic injury-related death and disability are increasing (Mock et al. 1999), especially in urban areas, to the extent where Nantulya and Reich (2002) argue that this public health crisis needs policy makers' immediate attention. In 2002, deaths due to road traffic accidents were 20.0 and above per 100,000 children aged 0-14 years across most of sub-Saharan Africa: the highest level worldwide (WHO 2004:31).

A small study of child accident victims in Ilesa, a town in south-west Nigeria (Adesunkanmi et al. 2000), found that the majority (89%) were pedestrians and mostly over 5 years: 60% of these child pedestrians were injured either while hawking at the roadside or on an errand. Motorcycles were involved in 20% of the cases. In Nigeria the continued expansion of motorcycle-taxi businesses, usually operated by young men, and commonly associated with risky driving styles, is likely to lead to a significant rise in injuries to drivers, passengers and pedestrians (see Report 2). Drawing on substantial household surveys (which provide a better assessment of rates than official statistics due to under-reporting) in rural Brong Ahafo and urban Kumasi, Mock et al. (1999) emphasise that, in both rural and urban Ghana, children have a particularly high exposure to accidents. In rural areas, 46% of injured pedestrians and 30% of injured cyclists were children (up to 15 years), while in Kumasi 52% of injured pedestrians and 33% of injured cyclists were children. Road safety problems of poorly maintained public transport, driven by poorly trained drivers over poorly maintained roads, are also likely to be a major problem (Potgeiter et al. 2006 re Eastern Cape, South Africa). Adequate disaggregation of data by gender is often missing in work on African road safety, but a recent review of published and grey literature on road traffic injury among children and adolescents (≤ 19 years) for urban areas sub-Saharan Africa suggests males are twice as likely to be involved as females (Hyder et al. 2006).

Despite the level of traffic injuries sustained by children in Africa, most receive little road safety training, though efforts have been in progress in a number of countries to promote road safety within the curriculum (in Uganda and Ghana, for instance, with support from DFID-funded TRL projects and in Ghana from DANIDA) [DFID transport newsletter, issue 11, nov. 2000: highlight on Road Safety; issue 18, May 2004; Danida 2002; www.trl.co.uk/1024/mainpage.asp?page=823, last accessed 3/05/2002].

Conclusion

The absence of a child focus in African transport policy is hardly surprising given that we know relatively little about the mobility and physical access constraints faced by girl and boy children in accessing health, educational and other facilities (and how these constraints impact on children's future livelihood opportunities and life chances). Such knowledge is essential if transport policy guidelines on how to help tackle current constraints are to be developed. Much of the material on which this paper draws comes from researchers whose primary focus is outside transport: transport specialists are only just beginning to recognise the significance of children's mobility. Fortunately, the importance of young people to development has been highlighted with the publication of the 2007 World Development Report, "Development and the next generation" (World Bank 2006). While this disappointingly incorporates only limited, peripheral discussion of transport and mobility issues (although there is much relevant related material), it will hopefully help move children and youth issues towards a more central place within the development agenda and consequently encourage transport specialists to recognise a constituency which, to date, has received little of their attention.

References

- Adesunkanmi, A.R.K et. al. (2000) Road traffic accidents to African children. **Injury** 31:225-228.
- Agarwal, S., Attah, M., Apt, N., Grieco, M., Kwakye, EA and Turner, J. 1997 Bearing the weight: the kayayoo, Ghana's working girl child. *International Social Work* 40,3: 245-56.
- AU-AfDB-ECA-WB-EU 2005 Transport and the Millennium Development Goals in Africa. Africa Union and UN Economic Commission for Africa, with the collaboration of the African Development Bank, World Bank and EU, February 2005.
- Avotri, R., L. Owusu-Darko, H. Eghan, S. Ocansey (1999) Gender and primary schooling in Ghana. Sussex: Institute of Development Studies.
- Barker, J. 2003 Passengers or political actors? Children's participation in transport 135-151.
- Bartlett, S. (2001) Children and development assistance: the need to re-orient priorities and programmes. *Development in Practice* 11, 1, 62-72.
- Behrens, R. (2004) Child and learner travel in Cape Town: problems and prospects. *Urban Forum* 15,3: 254-278.
- Benwell, M. 2006 Variations in children's mobilities across suburban space within the Cape Peninsula, South Africa. Paper presented at the New Directions in Children's Geographies conference, University of Northampton, 7-8/09/2006.
- Bledsoe, C. and Brandon, A. 1992 Child fosterage and child mortality in sub-Saharan Africa: some preliminary questions and answers. In van de Walle et al (eds) *Mortality and Society in sub-Saharan Africa*.
- Bonnet, M. 1993 Child labour in Africa. *International Labour Review* 132,3: 371-389.
- Bosu, W.K. et al. (1997) Factors affecting attendance to immunisation sessions... Ghana. *Acta Tropica* 68: 259-67.
- Bossyns, P., Abache, R., Abdoulaye, M.S., Miye, H., Depoorter, A.M., Van Lerberghe, W. 2006 Monitoring the referral system through benchmarking in rural Niger: an evaluation of the functional relation between health centres and the district hospital. *BMC Health Services Research* 6, 51: April 12, 2006.

Bratton, M. 2007 Are you being served? Popular satisfaction with health and education services in Africa. Afrobarometer Working Paper no. 65.

Bryceson, D.F., Maunder, D.A.C., Mbara TC, Kibombo, R., Davis, ASC and Howe, J.D.G.F. 2003 Sustainable livelihoods, mobility and access needs. Crowthorne, Transport Research Laboratory Report 544.

Bryceson, D. 2006 Ganyu casual labour, famine and HIV/AIDS in rural Malawi: causality and casualty. *J. of Modern African Studies* 44,2: 173-202.

Chant, S and Jones, G. (2005) Youth, gender and livelihoods in West Africa: perspectives from Ghana and the Gambia. *Children's Geographies* 3,2:185-199.

Cullinan, T.R. and Pieterick, C. 1998 Packaged treatment for first line care in cerebral malaria and meningitis. *Bull WHO* 76,3: 257-264.

Department of Transport (Republic of South Africa) 2005 The first South African National Household Travel Survey 2003: Technical report.

Department for International Development 2001 Children out of school. DFID: October 2001.

Ersado, L. (2005) Child labor and schooling decisions in urban and rural areas. *World Development* 33, 3: 455-480.

Farrington, J.H. 2007 The new narrative of accessibility: its potential contribution to discourses in (transport) geography. *Journal of Transport Geography* 15:319-330.

Fay, M., Leipziger, D, Wodon, Q. and Yepes, T. (2005) Achieving child-related millennium development goals: the role of infrastructure. *World Development*

Filmer, D. 2007 If you build it, will they come? School availability and school enrolment in 21 poor countries. *J. of Development Studies* 43,5: 901-928.

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Ford, K. and Hosegood, V. 2005 Aids mortality and the mobility of children in Kwazulu Natal, South Africa. *Demography* 42,4: 787-768.

Gibson, M.A and Mace, R. 2006 An energy-saving development initiative increases birth rate and childhood malnutrition in rural Ethiopia. *PLoS Medicine* 3,4: April 2006.

Government of Ghana (1992) The child cannot wait: a national programme of action on the follow-up to the world summit for children. Accra, June 1992.

Gould WT 1973 Gould, W. T.S. 1973 *Movements of school-children and provision of secondary schools in Uganda*. University of Liverpool. Department of Geography, African Population Mobility Project Working Paper, no. 3.

Grieco, M, Turner, J. and Kwakye, E, (1995) A tale of two cultures: ethnicity and cycling behaviour in urban Ghana. *Transport Research Record* 1441, Washington DC.

Grieco, M., Apt, N. and Turner J. (1996) At Christmas and on rainy days: transport, travel and the female traders of Accra. Aldershot: Avebury.

Holland, J, Reynolds, T. and Weller, S. (2007) Transitions, networks and communities: the significance of social capital in the lives of children and young people. *Journal of Youth Studies* 10,1: 97-116.

Hyder, A.A. Labinjo, M. and Muzaffar, S. 2006 A new challenge to child and adolescent survival in urban Africa: an increasing burden of road traffic injuries. *Traffic Injury Prevention* 7,4: 381-388.

James, J. (2006) Misguided investments in meeting MDGs: a reconsideration using ends-based targets. *Third World Quarterly* 27,3: 443-458.

Kamat, VR 2006 "I thought it was an ordinary fever!" cultural knowledge and the micropolitics of therapy seeking for childhood febrile illness in Tanzania. *Social Science and Medicine* 62: 2945-2959.

- Katz, C. (1991) Sow what you know: the struggle for social reproduction in rural Sudan. *Annals of the Association of American Geographers*, 81.3. 488-514.
- Katz, C. (1993) Growing girls/closing circles: limits on the spaces of knowing in rural Sudan and US cities. In Kinnaird, V, and Monk J. (eds) *Geographies of women over the life course*. London: Routledge.
- Katz, C. 2004 Growing up global: economic restructuring and children's everyday lives. University of Minnesota Press.
- Khandker, S.R., Lavy, V. and Filmer, D. 1994 Schooling and cognitive achievements of children in Morocco. Discussion paper no. 264. World Bank, Washington D.C.
- Kingham, S. and Ussher, S. 2007 An assessment of the benefits of the walking school bus in Christchurch, New Zealand. *Transportation Research Part A* 41: 502-510.
- Konadu-Agyemang 2000 edn
- Lavy V, Strauss J, Thomas D, de Vreyer P. 1996 Quality of health care, survival and health outcomes in Ghana. *Journal of health economics* 15: 333-357.
- Leach, F. with Machakanja, P. and Mandoga, J. 2000 Preliminary investigation of the abuse of girls in Zimbabwean junior secondary schools. DFID Education Research no. 39.
- Lee, R. 2004 Mobility matters: mothers, daughters and signifying difference among Africans in Cape Town, 1950-2000. Paper presented at the biennial conference of the African Studies Association, UK: Goldsmiths College, University of London.
- Leggett, I. 2005 Learning to improve education policy for pastoralists in Kenya. Chapter 6 in S. Aikman and E. Unterhalter (eds) *Beyond access: transforming policy and practice for gender equality in education*. Oxford: Oxfam GB, pp. 128-148.
- Levy, H. and Voyadzis, C. 1996 Morocco impact evaluation report: socio-economic influence of rural roads. Operations Evaluation Department, Report no. 15808-MOR, World Bank, Washington, D.C.
- Lewin KM and Sayed Y 2005 Non-government secondary schooling in sub-Saharan Africa. Exploring the evidence in South Africa and Malawi. Department for International Development, Educational Papers www.sussex.ac.uk/education/1-4-7.html
- Lupton and Bayley 2006
- Mahapa, S. 2000 Carting in the Northern Province : structural and geographical change. *Development Southern Africa* 17,2: 235-248.
- Mahapa, S. 2003 Integrating gender into World Bank financed transport programmes. case study South Africa Shova Kalula. Report, September 2003.
- Malmberg-Calvo, C. (1994) Case studies on the role of women in rural transport: access of women to domestic facilities. Washington DC: World Bank, SSATP Working Paper 11.
- Mitra, S. 2006 The hole in the wall project. <http://www.ncl.ac.uk/egwest/holeinthewall.html>
- OPM? 2003? Infrastructure and pro poor growth: implications of recent research.
- Mock, C.N. Forj uoh, S.N. and Rivara, F.P. (1999) Epidemiology of transport-related injuries in Ghana. *Accident Analysis and Prevention* 31:359-370.
- Nantulya VM and Reich, MR 2002 The neglected epidemic: road traffic injuries in developing countries. *British Medical Journal* 324: 1139-1141.
- Porter, G. (1997): Mobility and inequality in rural Nigeria: the case of off-road communities. *Tijdschrift voor Economische en Sociale Geografie* 88 (1):65-76.
- Porter, G. (2002) Living in a walking world: rural mobility and social equity issues in sub-Saharan Africa. *World Development* 30, 2, 285-300.

- Porter, G. and A. Abane (in press) Increasing children's participation in African transport planning: reflections on methodological issues in a child-centred research project. *Children's Geographies*.
- Porter, G. and K. Blaufuss (2002) Children, transport and traffic in southern Ghana. Paper presented at the workshop on Children and Traffic, Copenhagen, May 2-3, 2002. Available at www.dur.ac.uk/child.mobility/
- Porter, G., Blaufuss, K. and Owusu Acheampong F. (in press) Youth, mobility and rural livelihoods in sub-Saharan Africa: perspectives from Ghana and Nigeria. *Africa Insight*.
- Potgieter, C-A. R Pillay and S. Rama (2006) Women, development and transport in rural Eastern Cape, South Africa. HSRC Press.
- Prince, R. 2006 Popular music and Luo youth in western Kenya. In C. Christiansen et al. (eds) *Navigating youth, generating adulthood*. Uppsala: Nordiska Afrikainstitutet.
- Raso H, Utzinger J, Silue KD, Ouattara M, Yapi A, Toty A, Matthys B, Vounatsou P, Tanner M and N'Goran EK (2005) Disparities in parasitic infections, perceived ill health and access to health care among poorer and less poor schoolchildren of rural Cote d'Ivoire. *Tropical Medicine and International Health* 10,1: 42-57.
- Robson, E. 2004 Children at work in rural northern Nigeria: patterns of age, space and gender. *Journal of Rural Studies* 20: 193-210.
- Schildkraut, E. 1981 The employment of children in Kano. Chapter 2 in
- Turner, G. and Kwakye, E. 1996 Transport and survival strategies in a developing economy: case evidence from Accra, Ghana. *Journal of Transport Geography* 4,3: 161-168.
- Van Blerk, L. (2005) Negotiating spatial identities: mobile perspectives on street life in Uganda. *Children's Geographies* 3,1: 5-21.
- Waage, T. 2006 Coping with unpredictability: "preparing for life" in Ngaoudere, Cameroon. In C. Christiansen et al. (eds) *Navigating youth, generating adulthood*. Uppsala: Nordiska Afrikainstitutet.
- WHO 2004 Atlas of children's health and the environment. Geneva: World Health Organisation.
- Witter, S. and Bukokhe, J. (2004) Children's perceptions of poverty, participation and local governance in Uganda. *Development in Practice* 14, 5: 645-659.
- World Bank 2006 World Development Report 2007: Development and the next generation. Washington DC: World Bank.
- Young L. and Ansell N. 2003 Fluid households, complex families: the impacts of children's migration as a response to HIV/AIDS in southern Africa. *The Professional Geographer* 55,4: 464-476.
- Young, L. and Barrett, H. 2001 Adapting visual methods: action research with Kampala street children. *Area* 33,2, 141-152.